Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing reply, claims 1-3, 5-21, 23-40, 42, 44-61, and 63-65 are pending in the application, with 1, 23, 44, 64, and 65 being the independent claims. Claims 3, 64, and 65 are sought to be amended. Claims 41 and 62 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Personal Interview

A telephonic interview was held on Tuesday, April 5, 2005, between Examiner Enrique L. Santiago, Applicant's technical representative Charles Labarre, and Applicant's representative Kendrick P. Patterson (Registration. No. 45,321). Applicant would like to thank the Examiner for a helpful and constructive interview.

During the interview, Applicant's representatives and Examiner Santiago discussed the differences between the pending Claims and the Hopcroft patent (U.S. Patent 6,154,215). The Examiner discovered that the current version of the Claims located in the USPTO's image file wrapper is the originally filed Claims. The Examiner stated that the USPTO's image file wrapper has no record of the amended claims filed in

January and October of 2004. However, the private-side of PAIR shows the correctly

submitted amendments. After conferring with his SPE, the Examiner recommended that

the Applicant resubmit the correctly amended claims with the next Reply. Applicant's

representatives and the Examiner also discussed the Double Patenting objection, which

Applicant addresses below.

Allowable Subject Matter

In the Office Action, the Examiner has allowed claims 64 and 65, which

correspond to objected to claims 41 and 62, respectively. (Paper No. 102604, page 6).

Applicant acknowledges with appreciation the Examiner's allowance of these claims.

However, claims 64 and 65 are sought to be amended to place the claims in the same

form as the originally presented claims 41 and 62 that the Examiner indicated were

allowable in the Office Action dated July 7, 2003. (Paper No. 6, page 6). The amended

claims should still be allowable since the above amendments do not alter the Examiner's

reason for allowance.

Double Patenting Objection

In the Office Action, the Examiner objects to claims 41 and 62 under 37 CFR

§ 1.75 as allegedly being a substantial duplicate of allowed claims 64 and 65. (Paper No.

102604, page 6). This objection is no longer valid in light of the above amendment.

Amendments to the Specification

Applicants seek to amend Paragraphs 0029, 0030, and 0032 of the specification

to correct an obvious error. Paragraphs 0029, 0030, and 0032, as originally filed,

describe two elements illustrated in the original Figure 4 with an identical reference number, namely "user 410" and "optimization manager 410". Applicant seeks to amend the specification and Figures to rename "optimization manager 410" as "optimization manager <u>440</u>". These changes are believed to introduce no new matter, and their approval is respectfully requested.

Amendments to the Drawings

Applicant seeks to amend the Drawings by substituting the attached "Replacement Sheet" for Figure 4 for pending Figure 4. The attached Figure 4 is being submitted herewith under a separate pleading for approval.

Applicant respectfully requests approval of the proposed drawing changes provided herewith and illustrated in more detail in red ink on the attached "Annotated Markup Drawings" of Figure 4. The changes to the drawing are made to rectify an obvious error as illustrated in red ink.

In Figure 4, two elements (namely "user 410" and "optimization manager 410") have an identical reference number. As such, Applicant seeks to amend "optimization manager 410" to read "optimization manager <u>440</u>". This change is supported by amended Paragraphs 0029, 0030, and 0032, as recited and discussed above. These changes are believed to introduce no new matter, and their approval is respectfully requested.

Rejections under 35 U.S.C. § 103

In the Office Action, the Examiner sustains the rejection of claims 1-3, 5-21, 23-

40, 42, 44-61 and 63 under 35 U.S.C. § 103, as allegedly being obvious in view of one

or more of the following documents:

> (1) U.S. Patent 6,154,215 to Hopcroft (herein referred to as
> "Hopcroft"); and
>
> (2) U.S. Patent Application Publication 2002/0063704 A1 to
> Sowizral *et al.* (herein referred to as "Sowizral"). (Paper
> No. 102604, pages 2-6).

Each rejection is discussed separately below.

a.   *Hopcroft Rejection*

In the Office Action, the Examiner sustains the rejection of claims 1-3, 5-19, 21,

23-37, 39, 40, 42, 44-58, 60, 61 and 63 under 35 U.S.C. § 103, as allegedly being

obvious over Hopcroft. (Paper No. 102604, page 2). Applicant respectfully traverses.

Hopcroft does not teach or suggest Applicant's invention as recited in the

aforementioned claims. For example, Hopcroft lacks at least the following as recited in

independent claims 1, 23, and 44:

> 1)   regarding claim 1, Hopcroft does not teach or suggest "an
>   optimization configuration manager for *accepting user
>   configuration information to said optimization process*,
>   said user configuration information comprising selection of
>   one or more of said at least one atomic optimization";
>
> 2)   regarding claim 23, Hopcroft does not teach or suggest
>   "*receiving user input identifying an atomic optimization*
>   and any associated parameters"; and
>
> 3)   regarding claim 44, Hopcroft does not teach or suggest
>   "computer readable program code means for causing the

computer to *receive user input identifying an atomic optimization* and any associated parameters".

As presented in Applicant's previous Amendment and Reply (filed January 7, 2004), the method and apparatus disclosed in Hopcroft do not enable a "user" to "configure" an optimization process, or communicate "user input identifying an atomic optimization". Further to the Examiner's request during the above telephonic interview, support for these features can be found in Applicant's specification at, inter alia, Paragraphs 0030-0031 and FIG. 4, which describe an exemplary embodiment for enabling a user 410 to identify or select a specific atomic optimization (from a plurality of atomic optimizations listed in optimization registry 430 and contained at optimization base 425), and provide the selected atomic optimization (identified in user configuration information 415) to a configuration manager 420.

On the contrary, Hopcroft discloses

> a method and apparatus for creating and maintaining multiple scene graphs for the display of a computer generated object. The *user initially creates a user scene graph* which is comprised [sic] a number of nodes arranged in a hierarchical organization...In the present invention *this "user" scene graph is organized according to the dictates of the user* so that it can be more easily comprehended and used by a human. Thereupon, the computer system automatically converts this user scene graph into a *separate "rendering" scene graph*. The organization of this rendering scene graph is different from that of the user scene graph in that *the latter is optimized* so that the object can be rendered faster and more efficiently by the computer system....Thereby, the first scene graph is displayed to the user so that *the user can add, delete, or otherwise modify the object*, but the object is rendered for display according to the second scene graph. (Hopcroft, col. 2, lines 44-66, emphasis added).

Hence, as quoted above, Hopcroft only allows a user to "create" and "modify" a "scene graph," which is subsequently converted into a "rendering scene graph" that can be optimized by the "computer system". However, Hopcroft does not teach or suggest that its "user" can create or modify the specific "atomic optimizations" that are performed on the rendering scene graph.

To support his rejection of claim 1, the Examiner relies on the following passage from Hopcroft to teach the Applicant's "optimization configuration manager for *accepting user configuration information to said optimization process*, said user configuration information comprising selection of one or more of said at least one atomic optimization":

> In the present invention, the different representations are inter-related such that when the user makes a change in the user representation, the change is automatically and transparently carried over and reflected in the other representation(s). When the *computer* actually goes to render the scene graph, it *selects* and uses the representation that *has been specially optimized* for rendering purposes. (Hopcroft, col. 2, lines 32-38, <u>emphasis added</u>).

This passage does not teach or suggest Applicant's optimization manager as recited in claim 1. The user, in Hopcroft, is not providing "configuration information" to the "optimization process", and the user is especially not "selecting one or more atomic optimizations". On the contrary, the user is merely making a "change in the user representation" of a "scene graph". Hopcroft, thereafter, describes that a computer "renders the scene graph" (i.e., "the other representation(s)"), and the computer "selects and uses the representation *that has been specially optimized* for rendering purposes". No mention is made of a user's selecting any atomic optimizations that can be performed

on the "other representation(s)". Even though (as noted by the Examiner in the Advisory Action) Hopcroft describes that "the different representations are inter-related such that when the user makes a change in the user representation, the change is automatically and transparently carried over and reflected in the other representation(s)", nowhere does this passage remotely suggest that the "user changes" include the "selection of…[an] atomic optimization." In other words, Hopcroft's user has no control over the selection of the specific optimizations that are selected and implemented by the computer. Selecting a representation of a scene graph is not the equivalent to selecting an atomic optimization.

In the current Office Action, the Examiner further argues that Hopcroft teaches "…that the optimization takes place prior to the computer rendering the scene graph. Nowhere does it explicitly state the computer is selecting the specific optimization." (See Paper No 102604, page7, lines 13-15). However, the Examiner's position directly contradicts the teachings of Hopcroft that explicitly describes a "computer system" that includes software to "optimize rendering performance" because "the ways in which a human would intuitively organize a scene graph is oftentimes not the most efficient way for a computer system to render that scene." (See Hopcroft col. 1, lines 66-67; col. 2, lines 1-41; col. 5, lines 6-10; and col. 6, lines 18-20). Therefore, Applicant respectfully submits that Hopcroft does not teach or suggest that a "user" can "configure" an optimization process, or communicate "user input identifying an atomic optimization."

Specifically with respect to independent claims 23 and 44, the Examiner has not provided any evidence to argue that Hopcroft teaches or suggests "***user input identifying an atomic optimization*** and any associated parameters". Nonetheless, as discussed

above, Hopcroft's method and apparatus for creating a scene graph does not teach or suggest receiving "user input identifying an atomic optimization and any associated parameters". Hopcroft merely describes a user's ability to create and change elements of a scene. Again, as stated above, a computer, thereafter, converts the user's scene into a rendering scene graph, which can be optimized also by the computer. Hopcroft does not teach or suggest that the user can configure or select any atomic optimizations that can be performed on the rendering scene graph.

Accordingly, Hopcroft does not teach or suggest claims 1, 23, and 44. Claims 2, 3, and 5-21 depend from claim 1; claims 24-42 depend from claim 23; and claims 45-63 depend from claim 44. As such, these dependent claims are patentable over Hopcroft for at least the reasons stated above, in addition to the features, elements, and/or limitation recited therein. Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection of the aforementioned claims, and allowance thereof.

b.   *Hopcroft and Sowizral Rejection*

In the Office Action, the Examiner sustains the rejection of claims 20, 38, and 59 under 35 U.S.C. § 103, as allegedly being obvious over Hopcroft in view of Sowizral. (Paper No. 102604, page 5). Applicant respectfully traverses.

Claims 20, 38, and 59 depend from claims 1, 23, and 44, respectively, and are patentable over Hopcroft for at least the reasons stated above in addition to the features, elements, and/or limitations recited therein. In other words, Hopcroft does not teach or suggest that a user can configure, select, or identify an atomic optimization for a scene graph.

Sowizral does not cure the defects of Hopcroft since Sowizral also does not teach or suggest that a user can configure, select, or identify an atomic optimization for a scene graph.

Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection of the aforementioned claims, and allowance thereof.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully

requested.

                              Respectfully submitted,

                              STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

                              Kendrick P. Patterson
                              Attorney for Applicant
Date: _April 25, 2005_   Registration No. 45,321

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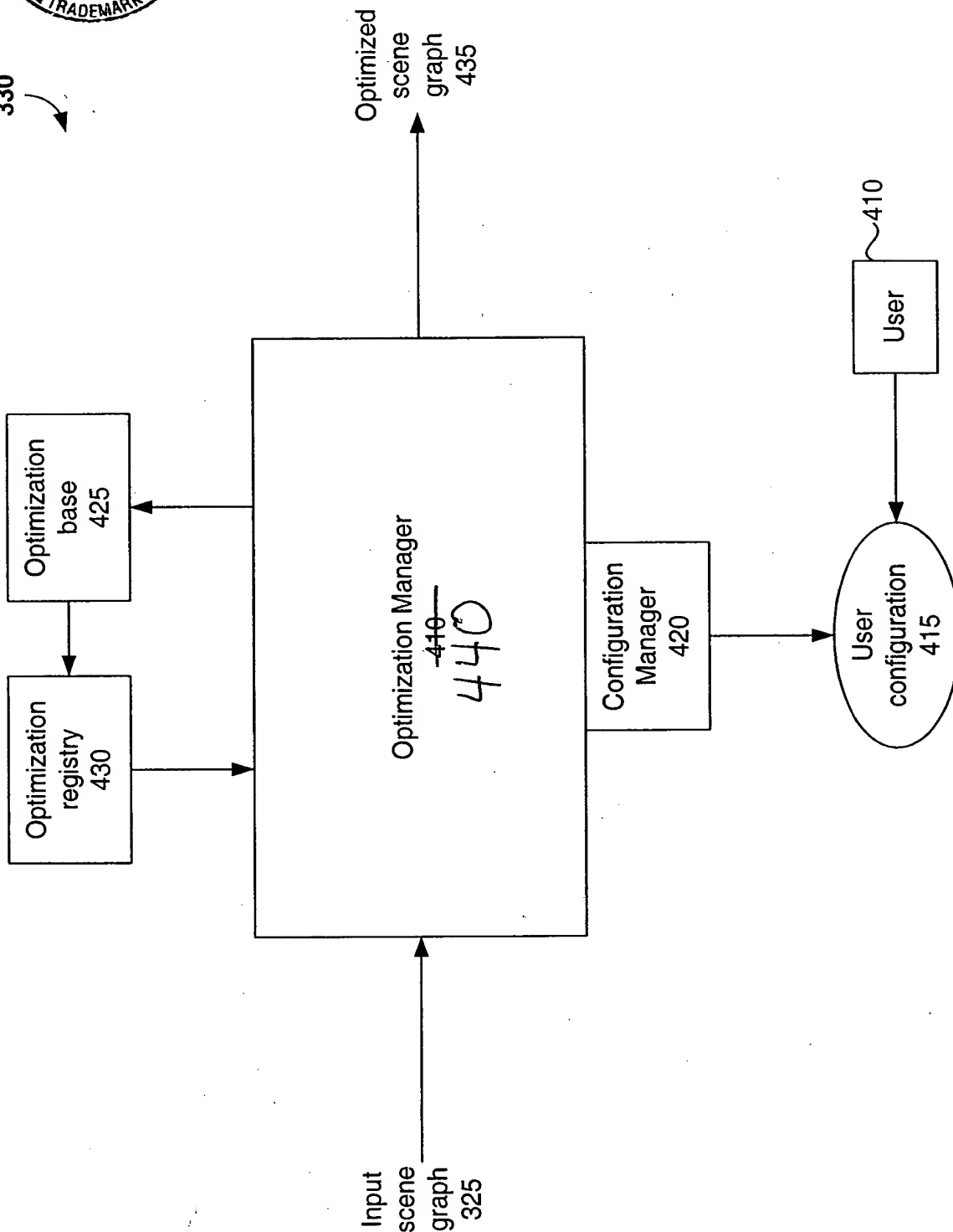Washington, D.C. 20005-3934
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FIG. 4

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